

## SEQUENCE LISTING

<110> KRIMMER, Hans-Peter

5 REICHERT, Dietmar

DRAUZ, Karlheinz

KLEMENT, Ingo

MAY, Oliver

10 <120> Process for the Preparation of Allylsine Acetal

<130> 210740US-10757-9350-0-X

<150> Germany 100 37 115.9

<151> 2000-07-28

<160> 6

15 <170> PatentIn version 3.1

<210> 1

<211> 1377

<212> DNA

20 <213> *Arthrobacter aurescens*

<400> 1

atgtttgacg taatagttaa gaactgccgt atggtgtcca gcgacggaat caccgaggca 60

gacattctgg tgaaagacgg caaagtcgcc gcaatcagcg cggacacacg tgatgtcgag 120

25 gccagccgaa ccattgacgc ggggtggcaag ttcgtgatgc cgggctggt cgatgaacat 180

gtgcatatca tcgacatgga tctcaagaac cggatggcc gcttcgaact cgattccgag 240

tctgcggccg tgggaggcat caccaccatc atcgagatgc cgatcacctt cccaccacc 300

accactctgg acgccttcct tgaaaagaag aagcaggcgg ggcagcggtt gaaagttgac 360

ttcgcgctct atggaggtgg agtgccggga aacctgccc agatccgcaa aatgcacgac 420

30 gccggcgctg tgggcttcaa gtcaatgatg gcagcctcag tgccgggcat gttcgacgcc 480

gtcagcgacg gcgaactggt cgaaatcttc caagagatcg cagcctgtgg ttcagtcac 540  
 gtgggttcacg ccgagaatga aacgatcatt caagcgctcc agaagcagat caaggccgct 600  
 ggcggaagg acatggccgc ctacgaggca tcccaaccag tttccagga gaacgaggcc 660  
 attcagcgtg cgttgcttct gcagaaagaa gccggctgtc gactgatcgt gcttcacgtg 720  
 5 agcaaccctg acggcgctga gttaatacat caggcgcaat ccgaggggtca ggacgtccac 780  
 tgcgagtcgg gtccgcagta tctgaatatc accacggacg acgccgaacg aatcggaccg 840  
 tatatgaagg tcgcgcgcgc cgtccgctca gccgaaatga acgtcagggt atgggaacaa 900  
 ctcgagaacg gtgtcatcga cacccttga tcagatcatg gcggacatcc tgtcgaggac 960  
 aaagaacccg gctggaagga cgtgtggaaa gccggcaacg gtgcgctggg ccttgagaca 1020  
 10 tccctgccta tgatgctgac caacggagtg aacaagggca ggctatcctt ggaacgcctc 1080  
 gtcgaggtga tgtgcgagaa acctgcgaag ctttttggtg tctatccgca gaagggcacg 1140  
 ctacaggttg gttccgacgc cgatctactc atcctcgatc tggacattga caccaaagtg 1200  
 gatgcgtcgc agttccgatc cctgcataag tacagcccgt tcgacgggat gcccgtcacg 1260  
 ggtgcaccgg ttctgacgat ggtgcgcgga acggtgggtg ccgagcaggg agaagttctg 1320  
 15 gtcgagcagg gattcggcca gtctgctacc cgtcaccact acgaggcgtc gaagtga 1377

&lt;210&gt; 2

&lt;211&gt; 711

&lt;212&gt; DNA

20 <213> *Arthrobacter aurescens*

&lt;400&gt; 2

atgagaatcc tcgtgatcaa cccaacagt tccagcgcgc ttactgaatc ggttgccggac 60  
 gcagcacaac aagttgtcgc gaccggcacc ataatttctg ccatcaaccc ctccagagga 120  
 25 cccgccgtca ttgaaggcag ctttgacgaa gcactggcca cgttccatct cattgaagag 180  
 gtggagcgcg ctgagcggga aaacccgccc gacgcctacg tcatcgcatg tttcggggat 240  
 ccgggacttg acgcgggtcaa ggagctgact gacaggccag tggtaggagt tgccgaagct 300  
 gcaatccaca tgtcttcatt cgtcgcggcc accttctcca ttgtcagcat cctcccagag 360  
 gtcaggaaac atctgcacga actggtacgg caagcggggg cgacgaatcg cctcgcctcc 420  
 30 atcaagctcc caaatctggg ggtgatggcc ttccatgagg acgaacatgc cgcactggag 480

acgctcaaac aagccgccaa ggaggcggtc caggaggacg gcgccgagtc gatagtgttc 540  
 ggatgcgccg gcatggtggg gtttgcgcgt caactgagcg acgaactcgg cgtccctgtc 600  
 atcgaccccg tcgaggcagc ttgccgcgtg gccgagagtt tggtcgctct gggctaccag 660  
 accagcaaag cgaactcgta tcaaaaaccg acagagaagc agtacctcta g 711

5

&lt;210&gt; 3

&lt;211&gt; 1239

&lt;212&gt; DNA

<213> *Arthrobacter aurescens*

10

&lt;400&gt; 3

atgaccctgc agaaagcgca agcggcgcgc attgagaaag agatccggga gctctcccg 60  
 ttctcggcag aaggccccgg tgttaccggc ctgacctaca ctccagagca tgccgccgcg 120  
 cgggaaacgc tcattgcggc tatgaaagcg gccgccttga gcgttcgtga agacgcactc 180  
 15 ggaaacatca tcggccgacg tgaaggcact gatccggagc ttcttgcgat cgcggtcggc 240  
 tcacacttcg attctgtccg aaacggcggg atgtttgatg gcaactgcagg cgtgggtgtgc 300  
 gcccttgagg ctgcccgggt gatgctggag aacggctacg tgaatcggca tccatttgag 360  
 ttcatcgcga tcgtggagga ggaaggggccc cgcttcagca gtggcatgtt gggcggccgg 420  
 gccattgcag ggttggtcgc cgacagggaa ctggactctt tggttgatga ggatggagtg 480  
 20 tccgttaggc aggcggctac tgccttcggc ttgaagccgg gcgaactgca ggctgcagcc 540  
 cgctccgcgg cggacctgcg tgcttttatc gaactacaca ttgaacaagg accgatcctc 600  
 gagcaggagc aaatagagat cggagtgtga acctccatcg ttggcgttcg cgcattgcgg 660  
 gttgccgtca aaggcagaag cgaccacgcc ggcacaaccc ccatgcacct gcgccaggat 720  
 gcgctggtac ccgccgctct catggtgagg gaggtcaacc ggttcgtcaa cgagatcgcc 780  
 25 gatggcacag tggtaccgt tggccacctc acagtggccc ccggtggagg caaccaggtc 840  
 ccggggggagg tggacttcac actggacctg cgttctccgc atgaggagtc gctccgcgtg 900  
 ctgatcgacc gcatctcggc catggtcggc gaggtcgcct ccaggccgg tgtggctgcc 960  
 gatgtggatg aatTTTTTcaa tctcagcccc gtgcagctgg ctctaccat ggtggacgcc 1020  
 gttcgcgaag cggcctcggc cttgcagttc acacaccggg atatcagcag tggggcgggc 1080  
 30 cacgactcga tgttcatcgc ccaggtcacg gacgtcggaa tggttttcgt tccaagccgt 1140

gctggccgga gccacgttcc cgaagaatgg accgatttcg atgaccttcg caaaggaact 1200  
gaggttgctc tccgggtaat gaaggcactt gaccggtaa 1239

<210> 4

5 <211> 1377

<212> DNA

<213> artificial sequence

<220>

<223> Description of synthetic sequence: evolved hydantoinase

10

<400> 4

atgtttgacg taatagttaa gaactgccgt atggtgtcca gcgacggaat caccgaggca 60  
gacattcttg tgaaagacgg caaagtcgcc gcaatcagct cggacacaag tgatgttgag 120  
gcgagccgaa ccattgacgc ggggtggcaag ttcgtgatgc cgggcgtggc cgatgaacat 180  
15 gtgcatatca tcgacatgga tctgaagaac cggatatggc gcttcgaact cgattccgag 240  
tctgcggccg tgggaggcat caccaccatc tttgagatgc cgtttacctt cccgcccacc 300  
accacttttg acgccttctc cgaaaagaag aagcaggcgg ggcagcgggt gaaagttgac 360  
ttcgcgctct atggcggtgg agtgccggga aacctgcccg agatccgcaa aatgcacgac 420  
gccggcgcag tgggcttcaa gtcaatgatg gcagcctcag ttccgggcat gttcgacgcc 480  
20 gtcagcgacg gcgaactggt cgaaatcttc caggagatcg cagcctgtgg ttcagtcgcc 540  
gtggtccatg ccgagaatga aacgatcatt caagcgctcc agaagcagat caaagccgct 600  
ggtcgcaagg acatggccgc ctacgaggca tcccaaccag ttttccagga gaacgaggcc 660  
attcagcgtg cgttactact gcagaaagaa gccggctgtc gactgattgt gcttcacgtg 720  
agcaaccctg acgggggtcg gctgatacat cgggcgcaat ccgagggcca ggacgtccac 780  
25 tgcgagtcgg gtccgcagta tctgaatatc accacggacg acgccgaacg aatcggaaccg 840  
tatatgaagg tcgcgccgcc cgtccgctca gccgagatga acgtcagatt atgggaacaa 900  
cttgagaacg ggctcatcga cacccttggg tcagaccacg gcggacatcc tgtcgaggac 960  
aaagaacccg gctggaagga cgtgtggaaa gccggcaacg gtgcgctggg ccttgagaca 1020  
tccctgccta tgatgctgac caacggagtg aataaaggca ggctatcctt ggaacgcctc 1080

gtcgaggtga tgtgcgagaa acctgcgaag ctctttggca tctatccgca gaagggcacg 1140  
 ctacaggttg gttccgacgc cgatctgctc atcctcgatc tggatattga caccaaagtg 1200  
 gatgcctcgc agttccgacg cctgcataag tacagcccgt tcgacgggat gcccgtcacg 1260  
 ggtgcaccgg ttctgacgat ggtgcgcgga acggtggtgg cagagaaggg agaagttctg 1320  
 5 gtcgagcagg gattcggcca gttcgtcacc cgtcacgact acgaggcgtc gaagtga 1377

<210> 5

<211> 711

10 <212> DNA

<213> *Arthrobacter aureus*

<400> 5

atgagaatcc tcgtgatcaa ccccaacagt tccagcgccc ttactgaatc ggttgccggac 60  
 15 gcagcacaac aagttgtcgc gaccggcacc ataatttctg ccatcaaccc ctccagagga 120  
 cccgccgtca ttgaaggcag ctttgacgaa gcactggcca cgttccatct cattgaagag 180  
 gtggagcgcg ctgagcggga aaacccgccc gacgcctacg tcatcgcatg tttcggggat 240  
 ccgggacttg acgcggtcaa ggagctgact gacaggccag tggtaggagt tgccgaagct 300  
 gcaatccaca tgtcttcatt cgtcgcggcc accttctcca ttgtcagcat cctcccgagg 360  
 20 gtcaggaaac atctgcacga actggtacgg caagcggggg cgacgaatcg cctcgcttcc 420  
 atcaagctcc caaatctggg ggtgatggcc ttccatgagg acgaacatgc cgactggag 480  
 acgtcaaac aagccgcca ggaggcggtc caggaggacg gcgccgagtc gatagtgtc 540  
 ggatgcgccg gcatggtggg gtttgccgct caactgagcg acgaactcgg cgtccctgtc 600  
 atcgaccccg tcgaggcagc ttgccgcgtg gccgagagtt tggtcgctct gggctaccag 660  
 25 accagcaaag cgaactcgta tcaaaaaccg acagagaagc agtacctcta g 711

<210> 6

<211> 1263

<212> DNA

<213> *Arthrobacter aurescens*

<220>

<221> misc\_feature

5 <222> (25)..(25)

<223> n=any nucleotide

<400> 6

	atgaccctgc agaaagcgca agcgnagcgc attgagaaag agatctggga gctctcccgg	60
10	ttctcggcgg aaggccccgg tgttaccogg ctgacctaca ctccagagca tgccgccgcg	120
	cgggaaacgc tcattgcggc tatggaagcg gccgctttga gcgttcgtga agacgtctc	180
	gggaacatca tcggccgacg tgaaggcact gatccgcagc tccctgcgat cgcggtcggt	240
	tcacacttcg attctgtccg aaacggcggg atgttcgatg gcaactgcagg cgtggtgtgc	300
	gcccttgagg ctgcccgggt gatgctggag agcggctacg tgaatcgga tccatttgag	360
15	ttcatcgca tcgtggagga ggaaggggcc cgcttcagca gtggcatgtt gggcggccgg	420
	gccattgcag gtttggtcgc cgacagggaa ctggactctt tggttgatga ggatggagtg	480
	tccgttaggc aggcggctac tgccttcggc ttgaagccgg gcgaactgca ggctgcagcc	540
	cgtcccgcg cgacactgcg tgcttttatc gaactacaca ttgaacaagg accgatcctc	600
	gagcaggagc aaatagagat cggagttgtg acctccatcg ttggcggttcg cgcattgcgg	660
20	gttgctgtca aaggcagaag cgcacacgcc ggcacaacct ccatgcacct gcgccaggat	720
	gcgctggtac ccgccgtct catggtgcgg gaggtcaacc gggttcgtcaa cgagatcgcc	780
	gatggcacag tggctaccgt tggccacctc acagtggccc ccggtggcgg caaccaggtc	840
	ccgggggagg tggagttcac actggacctg cgttctccgc atgaggagtc gctccgggtg	900
	ttgatcaacc gcatctcgg catggtcggc gaggtcgctt cgcaggccgg tgtggctgcc	960
25	gatgtggatg aatttttcaa tctcagcccc gtgcagctgg ctctaccat ggtggacgcc	1020
	gttcgcgaag cggcctcggc cctgcagttc acgcaccggg atatcagcag tggggcgggc	1080
	cacgactcga tgttcatcgc ccaggtcacg gacgtcggaa tggttttcgt tccaagccgt	1140
	gctggccgga gccacgttcc cgaagaatgg accgatttcg atgaccttcg caaggggaact	1200
	gaggttgtcc tccgggtaat gaaggcactt gaccggggat cccatcatca tcatcatcat	1260
30	tga	1263